

**Notice of Allowability**

Application No.

10/714,457

Applicant(s)

LEE ET AL.

Examiner

Sung H. Pak

Art Unit

2874

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendments filed 7/22/05, 9/01/05.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

*Sung Pak*  
Patent Examiner  
AU 2874

## **DETAILED ACTION**

### ***Response to Amendment***

Applicants' amendment filed 7/22/2005 and the supplemental amendment filed 9/01/2005 have been entered. As discussed in pages 7-8 of the applicants' remarks (amendment filed on 9/01/2005), amended limitations are fully supported by the cited sections of the disclosure and no new matter is added.

Claims 1-20 are now pending.

### ***Allowable Subject Matter***

Claims 1-20 are allowed.

The following is an examiner's statement of reasons for allowance:

Photonic bandgap or photonic crystal waveguides are well known in the art. Recently, optical switching devices utilizing such photonic bandgap or photonic crystal waveguides have been developed. The closest prior art to the present invention is Cotteverte et al (US 2002/0048422 A1). As discussed in the previous office action Cotteverte discloses a 2x2 photonic crystal waveguide switch device having input and output ports with 4 waveguide elements for switching transmitted optical beams (Figs. 28-31).

However, none of the prior art fairly teaches or suggests such 2x2 photonic crystal waveguide switches, wherein input optical beams are switched to either one of the adjacent output ports via photonic crystal waveguide structures as claimed in the instant application (see amended claims 1 and new claim 15). In addition, there is no motivation suggested in the prior art, or generally available to one of ordinary skill in the art to modify the structure of Cotteverte

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to arrive at the claimed switching structures of the present application. The fundamental structure and the functioning of the present invention is very different from the device shown in Cotteverte, and none of the prior art fairly teaches how and why one of ordinary skill in the art would modify the structure of Cotteverte to arrived at the instant claimed structure.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sung H. Pak whose telephone number is (571) 272-2353. The examiner can normally be reached on Monday- Friday, 9AM-5PM.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'Sung H. Pak', with a long horizontal flourish extending to the right.

Sung H. Pak  
Patent Examiner  
Art Unit 2874

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